

**Louisville Metro Air Pollution Control District**  
**850 Barret Ave., Louisville, Kentucky 40204**  
**15 October 2014**

**Construction Statement of Basis**

**Company:** BAE Systems

**Plant Location:** 163 Rochester Drive, Louisville, Kentucky 40214

**Date Application Received:** 11 September 2014      **Application Number:** 66942  
04 February 2010      11515

**Date of Draft Permit:** 15 October 2014  
14 July 2010

**District Engineer:** Emily Tyler

**Permit No:** 29-10-C(R1)

**Plant ID:** 1216

**SIC Code:** 3489

**NAICS:** 332994

**AFS:** 01216

**Introduction:**

This permit will be issued pursuant to District Regulation 2.03, Permit Requirements - Non-Title V Construction and Operating Permits and Demolition/Renovation Permits. Its purpose is to provide methods of determining continued compliance with all applicable requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), 1 hr and 8 hr ozone (O<sub>3</sub>), and particulate matter less than 10 microns (PM<sub>10</sub>); and is a non-attainment area for particulate matter less than 2.5 microns (PM<sub>2.5</sub>). A portion of the county is non-attainment for sulfur dioxide (SO<sub>2</sub>).

**Application Type/Permit Activity:**

☐ Initial Issuance  
☒ Permit Revision  
    ☐ Administrative  
    ☐ Minor  
    ☒ Significant  
☐ Permit Renewal  
☒ Construction

**Compliance Summary:**

☒ Compliance certification signed      ☐ Compliance schedule included  
☐ Source is out of compliance      ☒ Source is operating in compliance

**I. Source Information**

- 1. Product/Process Description:** BAE Systems manufactures and refurbishes weapons systems for the military.
- 2. Project Description:** The source installed one (1) JBI front air flow spray booth model T-25-WSB-S (U16-E44) for coating miscellaneous metal parts and non-metal parts.
- 3. Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.
- 4. Emission Unit Summary:**

Construction No.	Equipment Description
29-10-C(R1)	One (1) JBI front air flow spray booth model T-25-WSB-S (U16-E44) for coating miscellaneous metal parts and non-metal parts.

**5. Permit Revisions:**

Revision No.	Date of Issuance	Public Notice Date	Type	Emission Unit/Page No.	Description
Initial	07/31/2010	06/25/2010	Initial	Entire Permit	Initial Permit Issuance
R1	X/X/2014	10/15/2014	Significant Revision	Entire Permit	Revision to add Regulation 7.25 to allow for non-metal parts to be painted in the paint booth.

- 6. Fugitive Sources:** There are no fugitive emissions for this project.

**7. Plantwide Emission Summary:**

Pollutant	District Calculated Actual Emissions 2012 Data (tpy)	Major Source Status (based on PTE)
CO	1.380	No
NO <sub>x</sub>	5.673	No
SO <sub>2</sub>	0.010	No
PM/PM <sub>10</sub>	3.757/3.592	Yes <sup>1</sup>
VOC	9.773	No
Single HAP	0.008	Yes
Total HAPs	0.515	Yes

Note<sup>1</sup>: Major for Title V, limit taken to not be major for pollutant for PSD.

**8. Applicable Requirements:**

<input type="checkbox"/> PSD	<input type="checkbox"/> 40 CFR 60	<input checked="" type="checkbox"/> SIP	<input checked="" type="checkbox"/> 40 CFR 63
<input type="checkbox"/> NSR	<input type="checkbox"/> 40 CFR 61	<input checked="" type="checkbox"/> District-Origin	<input type="checkbox"/> Other

**9. MACT Requirements:**

40 CFR 63 Subpart M: *National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products*

**10. Referenced Federal Regulations in Permit:**

40 CFR 63 Subpart M: *National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products*

**II. Regulatory Analysis**

**1. Acid Rain Requirements:** The source is not subject to the Acid Rain Program.

**2. Stratospheric Ozone Protection Requirements:** Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. This source does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

**3. Prevention of Accidental Releases 112(r):** The source does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount. If the source becomes subject to 40 CFR 68 and Regulation 5.15, the source shall comply with the Risk Management Program and Regulation 5.15 and submit a Risk Management Plan to:

RMP Reporting Center  
P.O. Box 3346  
Merrifield, VA 22116-3346

**4. Basis of Regulation Applicability****a. Applicable Regulations:**

Regulation	Title	Type
2.03	Permit Requirements – Non-Title V Construction and Operating Permits and Demolition/Renovation Permits	SIP
2.05	Prevention of Significant Deterioration of Air Quality	SIP

2.16	Title V Operating Permits	SIP
5.01	General Provisions	Local
5.21	Environmental Acceptability for Toxic Air Contaminants	Local
7.08	Standards of Performance for New Process Operations	SIP
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	SIP
7.59	Standard of Performance for New Miscellaneous Metal Parts and Products Surface Coating Operations	SIP
40 CFR 63 Subpart MMMM	National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products	Federal

**b. Basis for Applicability**

<b>Regulation</b>	<b>Basis for Applicability</b>
5.00, 5.21	Establishes the requirements for Environmental Acceptability for TACs. The source is a Group I company with TAC emissions.
7.08	Requirements for PM emission from new processes that commences construction after September 1, 1976.
7.25	Requirements for VOC emissions from new processes after December 16, 1987
7.59	Requirements for VOC emissions from new paint spray booths for metal parts commenced after May 20, 1981
40 CFR 63 Subpart MMMM	Applies to a facility that applied coatings to large appliance parts or products located at a major source of HAPs

**c. Plant-wide**

- i. BAE Systems is a potentially major source for the pollutant PM<sub>10</sub>. Regulation 2.05 – *Prevention of Significant Deterioration of Air Quality* establishes requirements to limit the plant-wide potential emission rates to below PSD source threshold levels and to provide methods of determining continued compliance with all applicable requirements. Per Regulation 2.05 plant-wide PM<sub>10</sub> emissions are limited to less than 100 tons during any consecutive 12-month period.
- ii. Regulation 2.03 – *Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements*, section 6.1 requires monitoring, record keeping, and reporting assuring ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the District upon request.

d. **Permit 29-10-C(R1)**i. **Equipment:**

Description Make/Model	Maximum Capacity	Control Device Description
Spray Booth (U16-E44) JBI/T-25-WSB-S	N/A	Filters

ii. **Standards/Operating Limits**a. **VOC**

- 1) Regulation 7.59 limits VOC emissions from equipment subject to the regulation to five (5) tons, plantwide, during and consecutive 12-month period unless a compliant coating is used for coating miscellaneous metal parts.

Or

- 2) The compliant coating VOC emission rates (excluding water and exempt solvents) in Regulation 7.59 are:
  - a. 0.52 kg of VOC/l (4.3 lb of VOC/gal) of coating as applied for clear coatings.
  - b. 0.42 kg of VOC/l (3.5 lb of VOC/gal) of coating as applied for air-dried coatings.
  - c. 0.42 kg of VOC/l (3.5 lb of VOC/gal) of coating as applied for extreme performance coatings.
  - d. 0.36 kg of VOC/l (3.0 lb of VOC/gal) of coating as applied for all other coatings.
- 3) Regulation 7.25 limits VOC emissions from equipment subject to the regulation to less than five (5) tons, plantwide, during and consecutive 12-month period.

b. **PM**

The emission standard for PM with a process throughput of less than 1,000 lb/hr is 2.34 lb/hr in accordance with Regulation 7.08, section 3.1.2.

c. **Opacity**

Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

d. **HAP**

- 1) Per Regulation 5.02, section 3.74, the source is subject to 40 CFR Part 63, Subpart Mmmm.
- 2) The surface coating facility at BAE Systems is identified as an existing source according to 40 CFR 63.3882. All coatings used at this plant are classified as general use coatings. Therefore the source has a standard of 2.6 lbs organic HAP emission per gallon coating solids used during each 12-month compliance period.

e. **TAC**

- 1) Regulations 5.01 and 5.21 require that TAC emissions do not exceed environmentally acceptable levels, whether specifically established by modeling or determined by the District to be de minimis.
- 2) The potential uncontrolled TAC emissions from this unit have been determined by the District to be de minimis based on PTE evaluation.

**III. Other Requirements**

1. **Temporary Sources:** The source did not request to operate any temporary facilities.
2. **Short Term Activities:** The source did not report any short term activities.
3. **Emissions Trading:** N/A
4. **Operational Flexibility:** The source did not request any operational flexibility for the emission point.
5. **Compliance History:**

Incident Date(s)	Regulation Violated	Result
5/19/1993	Reg. 2.03, Section 1, Permit required -Construct/Modify	Agreement
8/24/1993	Reg. 7.59, Section 3, VOC exceeding standard Reg. 1.06, Section 3, Source self-monitoring emissions reporting	Agreement
7/13/1994	Reg. 2.03, Section 1, Permit required-operating	Agreement
8/10/1994	Reg. 5.04, Section 7, Asbestos notification none	Board Order
8/23/1994	Reg. 2.03, Section 1, Permit required-operating	Agreement

11/21/1994	Reg. 1.05, Section 5, CMES maintenance requirements; Reg. 5.12, Air toxics exceeding standards	Board Order
7/10/1998	Reg. 7.59, Section 3, VOC exceeding standard	Agreement
3/1/2005	Reg. 5.02, Section 2, Subpart N emission standard, Chromium emissions	Board Order
3/31/2007	Reg. 2.03, Section 1, Permit required – construction /modify; Reg. 2.03, Section 5, Failure to comply with District permit; Reg. 2.16, Section 5, Failure to comply with Title V permit	Board Order
2/19/2014	Reg. 1.05, Section 5, CMES maintenance requirements, Reg. 2.03, Section 5, Failure to comply with District permit	Board Order

6. **Insignificant Activities:** There are no insignificant activities contained in this construction permit
7. **Calculation Methodology:** Mass balance method shall be used to determine the criteria pollutants and HAP emissions based on coating material usage and pollutant contents per MSDS of the coating materials.
8. **Permit Fee:** The construction permit fee of \$2,542.40 is based on the Schedule of Fees table in Regulation 2.08, section 12. The following table is a breakdown of the applicable fees.

Fee Type	Amount
Permit Actions: Significant Revision	\$2,542.40